

AMENDMENTS TO THE DRAWINGS

Figs. 1-13 have been formalized, and the Japanese text in the figures has been eliminated and replaced with its English equivalent.

New Figs. 10A and 13A are submitted herewith. As discussed in the Remarks section, these new figures are fully supported by the disclosure as originally filed. No new matter has been entered.

Attachment: Eleven (11) Replacement Drawing Sheets (including figs. 1-13)
Two (2) New Drawing Sheets (including new Figs. 10A and 13A)

REMARKS

Claims 1-44, all the claims pending in the application, stand rejected. Reconsideration and allowance of all the claims are respectfully requested in view of the following remarks.

Claim Objections

Claim 28 is objected to because the word “blown” is misspelled. Applicant has corrected this typographical error.

Drawings

The drawings are objected to under 37 C.F.R. § 1.83(a) because they do not show every feature of the invention specified in the claims. The Examiner asserts that the nozzles from which air is blown toward the bottom face of the self-propelled members to form an air bearing layer to support the self-propelled member and a skirt member on the peripheral portion of the bottom face of the self-propelled member, as recited in claims 8-10, 19, 28, 30 and 42, must be shown or the features canceled from the claims. Further, the Examiner objects to the presence of Japanese language in the drawings. The Examiner cautions that no new matter may be entered.

Formal substitute drawings which contain only English language text have been submitted herewith as Replacement Drawing Sheets.

Further, with respect to the requirement for an illustration of the self-propelled member and skirt member, Applicant has submitted herewith New Drawing Sheets, including new Figs. 10A and 13A, which are clearly supported by the original claims and written description.

In particular, new Figs. 10A and 13A, are substantially the same as the subject matter illustrated in Figs. 10 and 13 of the originally filed application. In this regard, Applicant illustrates a self propelled member 70 that is operative to travel over a traveling field 90. The self propelled member 70 has a skirt 84, which was provided around a circumferential portion of the lower face of the self-propelled member 70, so that it may travel over the traveling field 90 on an air bearing surface. Applicant illustrates the compressor 120 below the platen 72 so that air is caused to flow upwards through apertures in the platen.

The original disclosure and claims of the present application clearly support this arrangement.

First, it should be noted that the disclosure associated with Fig. 13 in the present application expressly teaches that the self-propelled member 70 is levitated minutely from the playing field. The disclosure also teaches that there is a need for some contrivance to accomplish this goal, such as bringing a brush provided in a lower portion of the self-propelled member into slidable contact with the traveling field 90.

Second, the specification also teaches—at page 23, line 6—that a power supply mechanism may be provided on a lower face of the racing track, and that current collectors may be formed on the self-propelled member which is brought into slidable contact with the lower face. Clearly, the description contemplates power being provided by a mechanism under the field 90.

Third, immediately following the foregoing description, at page 24, a hydraulic example is given. With respect to the example, it is expressly stated that:

“For example nozzles from air is blown towards a bottom face of the self-propelled member may be formed on the traveling field to form an air bearing layer between the bottom face and the traveling field to support the self-propelled member thereon.

In this configuration, the self-propelled member is supported by an air bearing constituted of a thin air layer. The self-propelled layer travels over the traveling field while slightly being supported and levitated by the air layer. Consequently, traveling resistance of the self-propelled member is diminished. The self-propelled member can travel freely by small traveling and driving force originated from the player motor.

Here it is preferable that skirt member is formed on a peripheral portion of the bottom face of the self-propelled member.

In this configuration, the skirt member 84 effectively captures an air flow blown from the nozzles formed on the traveling field. Hence, the self-propelled member can be slightly levitated from the surface of the traveling field by a relatively weak air flow from the nozzles.

Given the description of the hydraulic embodiment, following the description of Fig. 13 in the present application, one of ordinary skill would clearly understand the schematic

representation of the invention as shown in the newly submitted Figs. 10A and 13A. One of ordinary skill would not consider the illustration in Figs. 10A and 13A as introducing new matter.

Specification

The Examiner has objected to the misspelling of the word “blown” and asserts that there are errors throughout the specification. Applicant has corrected this and similar misspellings of which he is aware.

Double Patenting

The Examiner rejects claims 1, 11, 20 and 33 on the grounds of non-statutory obviousness-type double patenting as being unpatentable over claims 1 and 11 of U.S. Patent 6,840,837. Applicant respectfully requests that the Examiner reevaluate this rejection in light of the amendments made to claims 1, 11, 20, and 33.

Claim Rejections - 35 U.S.C. § 103

Claims 1, 3, 4, 7, 9, 11, 13, 14, 17, 19, 20, 22, 23, 26, 27, 29, 31, 33, 35, 36, 40, 41 and 43 are rejected under § 103(a) as being unpatentable over Nakagawa (5,601,490) in view of Sutoki (JP 09261944 A). Applicant respectfully traverses this rejection because, for at least the following reasons, the references fail to teach or suggest all of the elements as set forth and arranged in the claims.

In Nakagawa, the structure provided between the self-propelled member 17 and the miniature member 7 are not rotatable. This is because the structure need not be rotated. In the self-propelled member 17 of Nakagawa, the items 171 and 172 are pivotably coupled so that the front face of the self-propelled member 17 can be directed to any directions in accordance with the shape of the track 9 formed on the traveling field. On the other hand, the magnets 182, 183, 701, 702 are respectively fixed on the top part of the self-propelled member 17 and the bottom part of the miniature member 7. Thus, the front face of the miniature member 7 is directed to a direction that the front face of the item 172 directs.

In contrast, claims 1, 11, 20, and 33, set forth that: i) the direction to which the front face of the base body of the self-propelled member is maintained; and ii) a relative angle between the front face of the base body of the self-propelled member and the front face of the miniature member can be varied in accordance with the propelling direction of the base body of the self-propelled member. Nakagawa fails to show these features.

Instead, the controller in Nakagawa does not control an angle of rotation of a miniature member or a guide magnet in accordance with a propelling direction of a self-propelled member. The controller 50 is discussed at col. 12 and the driving of the motors discussed at col. 13. While the position of the cars is monitored by a position detector 56, there is no teaching that the rotation of the member or magnet is based upon position. Indeed, the control of the cars is primarily discussed with respect to winning probabilities at cols. 13 and 14.

In addition, there is no motivation to replace the wheel type self-propelled member of Nakagawa with the linear-motor type self-propelled member of Sutoki. In such a configuration obtained by the alleged combination, the front face of the miniature member is always directed forward irrespective of the propelling direction of the self-propelling member because the front face of the linear motor type self-propelled member is always directed forward and the magnets coupling the self-propelled member and the miniature member are fixed on the respective members (i.e., the relative angle between the front faces of the self-propelled member and the miniature member is not varied). One skilled person in the art would realize that such a movement of the miniature member is very unnatural.

On the basis of the foregoing comments, Applicant respectfully requests that the rejection be withdrawn on the basis of (1) the failure of the combination of references to teach all the claim limitations, (2) the failure of the references to teach the combination of limitations in the claim game environment and (3) the incompatibility of the references.

Claims 2, 5, 12, 15, 21, 24, 34, 37, and 44 are rejected under § 103(a) as being unpatentable over Nakagawa and Sutoki, and further in view of Helm (US 4,066,021 A). Applicant respectfully traverses this rejection for at least the following reasons.

As noted above, the Examiner's attempted combination of Nakagawa and Sutoki is deficient. Helm fails to cure the above-noted deficiencies in Nakagawa and Sutoki. Accordingly, the Examiner's attempted combination of Nakagawa, Sutoki, and Helm, also fails to render obvious Applicant's claims 2, 5, 12, 15, 21, 24, 34, 37, and 44.

Claims 6, 16, 25, 32, and 38 are rejected under § 103(a) as being unpatentable over Nakagawa, Sutoki, and Helm, and further in view of Li (US 4,618,271). Applicant respectfully traverses this rejection for at least the following reasons.

As noted above, the Examiner's attempted combination of Nakagawa, Sutoki, and Helm, is deficient. Li fails to cure the above-noted deficiencies in Nakagawa, Sutoki, and Helm. Accordingly, the Examiner's attempted combination of Nakagawa, Sutoki, Helm, and Li, also fails to render obvious Applicant's claims 6, 16, 25, 32, and 38.

Claims 8, 10, 19, 28, 30, and 42 are rejected under § 103(a) as being unpatentable over Nakagawa and Sutoki, and further in view of Altieri (US 3,224,771). Applicant respectfully traverses this rejection for at least the following reasons.

As noted above, the Examiner's attempted combination of Nakagawa and Sutoki is deficient. Altieri fails to cure the above-noted deficiencies in Nakagawa and Sutoki. Accordingly, the Examiner's attempted combination of Nakagawa, Sutoki, and Altieri, also fails to render obvious Applicant's claims 8, 10, 19, 28, 30, and 42.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Amendment under 37 C.F.R. § 1.111
Application No. 10/001,958

Atty. Docket: Q67392

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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CUSTOMER NUMBER

Date: August 10, 2006